Message

From: Terry Geis [terry.geis@usecology.com]
Sent: 11/21/2018 3:48:49 AM
To: Ball, Stephen [Ball.Stephen@epa.gov]
Subject: FW: USEI Structural Engineer Inspection
Attachments: ATT00001.txt

Here is a summary of the report (fwd e-mail below) we received from the structural engineer. We can discuss Wednesday morning with the whole team.

Thank you.

TG

From: Vaughn Thurgood
Sent: Tuesday, November 20, 2018 6:09 PM
To: Terry Geis <terry.geis@usecology.com>; Jason Evens <Jason.Evens@usecology.com>; Wade Roberson <wade.roberson@usecology.com>
Cc: Simon Bell <simon.bell@usecology.com>; Ken Knibbs <ken.knibbs@usecology.com>
Subject: FW: USEI Structural Engineer Inspection

Jason / Terry,

This message is intended to summarize the findings of our structural inspections which were performed today by myself and Reese Leavitt (Structural Engineer, Leavitt and Associates) at the USEI Grandview facility, subsequent to the recent catastrophic explosion at the Indoor Stabilization Building. The findings and recommendations are summarized below for individual structures which were evaluated.

Stab / Containment Bldg (90's) – Extensive damage has removed all panels and damaged a large portion of the lateral bracing members. Nonetheless the remaining intact portions of the primary and secondary framing members are sufficient to support the remaining dead load and is not in immediate threat of collapse. The primary risk associated with the remaining skeleton is related to overhead debris that could become dislodged during a wind event. It is recommended that a designated spotter is assigned to warn of shifting overhead debris.

Pad 7 Drum Storage (90's) – The primary steel framing members were observed to be sound and most of the lateral bracing was observed to be intact. Wall panels buckling was observed primarily on the south and north walls. The building still has sufficient structural integrity to allow for occupancy, as long as external loads are monitored. Repairs should be implemented as soon as possible to restore full integrity. In the interim period, the building should be vacated during high wind events (30+ mph) and during any significant snowfall (2+ inches)

Maintenance Shop (2015) – The primary steel framing members were observed to be sound and most of the lateral bracing was observed to be intact. Wall panels buckling was observed primarily on the upper portions of the south and east walls. The building still has sufficient structural integrity to allow for occupancy, as long as external loads are monitored. Repairs should be implemented as soon as possible to restore full integrity. In the interim period, the building should be vacated during high wind events (30+ mph) and during any significant snowfall (2+ inches).

Maintenance Quonset Hut – The primary framing members (steel hoops) were observed to be sound and most of the most of the panels were observed to be intact. The wood framing components located on the east end of building are highly compromised and will need to be demolished or extensively repaired. The Quonset hut is suitable for occupancy, with exception to the eastern portions (office and storage) of the building, where wood framing components are located.

Outdoor Stab Bridges – The structural members related to the excavator bridges were inspected and found to be suitable for continued normal use.

Reagent Silos – The structural steel members related to the reagent silos at both stabilization locations were inspected and found to be suitable for continued normal use. The receiver units located on top of the indoor stab silos appear to have experienced some debris impact related to the explosion. However, the debris impact poses a concern regarding operational (functional) considerations rather than structural integrity.

PCB Annex – The structural integrity of the PCB annex is highly compromised, subject to collapse and is not suitable for occupancy.

Administrative Bldgs – Each of the administrative support buildings located west of the stabilization (including lab, break room, decon, records storage, receiving, and managers offices) have been significantly compromised by the blast impacts and are not suitable for occupancy.

It is our intention to mobilize a construction crew to the site next Monday to begin procuring the materials needed for the repairs.

Thank you,

Vaughn Thurgood, PE
Director of Engineering

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